

## IUBMB Enzyme Nomenclature

## EC 2.4.2.1

**Common name:** purine-nucleoside phosphorylase

**Reaction:** purine nucleoside + phosphate = purine +  $\alpha$ -D-ribose 1-phosphate

**Other name(s):** inosine phosphorylase; PNPase; PUNPI; PUNPII; inosine-guanosine phosphorylase; nucleotide phosphatase; purine deoxynucleoside phosphorylase; purine deoxyribonucleoside phosphorylase; purine nucleoside phosphorylase; purine ribonucleoside phosphorylase

**Systematic name:** purine-nucleoside:phosphate ribosyltransferase

**Comments:** Specificity not completely determined. Can also catalyse ribosyltransferase reactions of the type catalysed by [EC 2.4.2.5](#), nucleoside ribosyltransferase.

**Links to other databases:** [BRENDA](#), [EXPASY](#), [GTD](#), [KEGG](#), [WIT](#), CAS registry number: 9030-21-1

**References:**

1. Agarwal, R.P. and Parks, R.E. Purine nucleoside phosphorylase from human erythrocytes. IV. Crystallization and some properties. *J. Biol. Chem.* 244 (1969) 644-647. [Medline UI: [69183117](#)]
2. Friedkin, M. and Kalckar, H. Nucleoside phosphorylases. In: Boyer, P.D., Lardy, H. and Myrbäck, K. (Eds.), *The Enzymes*, 2nd edn., vol. 5, Academic Press, New York, 1961, p. 237-255.
3. Heppel, L.A. and Hilme, R.J. Phosphorolysis and hydrolysis of purine ribosides from yeast. *J. Biol. Chem.* 198 (1952) 683-694.
4. Kalckar, H.M. The enzymatic synthesis of purine ribosides. *J. Biol. Chem.* 167 (1947) 477-486.
5. Saunders, P.P., Wilson, B.A. and Saunders, G.F. Purification and comparative properties of a pyrimidine nucleoside phosphorylase from *Bacillus stearothermophilus*. *J. Biol. Chem.* 244 (1969) 3691-3697. [Medline UI: [69234752](#)].
6. Tsuboi, K.K. and Hudson, P.B. Enzymes of the human erythrocyte. I. Purine nucleoside phosphorylase; isolation procedure. *J. Biol. Chem.* 224 (1957) 879-887.

[EC 2.4.2.1 created 1961]

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Return to [EC 2.4.2 home page](#)

Return to [EC 2.4 home page](#)

Return to [EC 2 home page](#)

Return to [Enzymes home page](#)

Return to [IUBMB Biochemical Nomenclature home page](#)